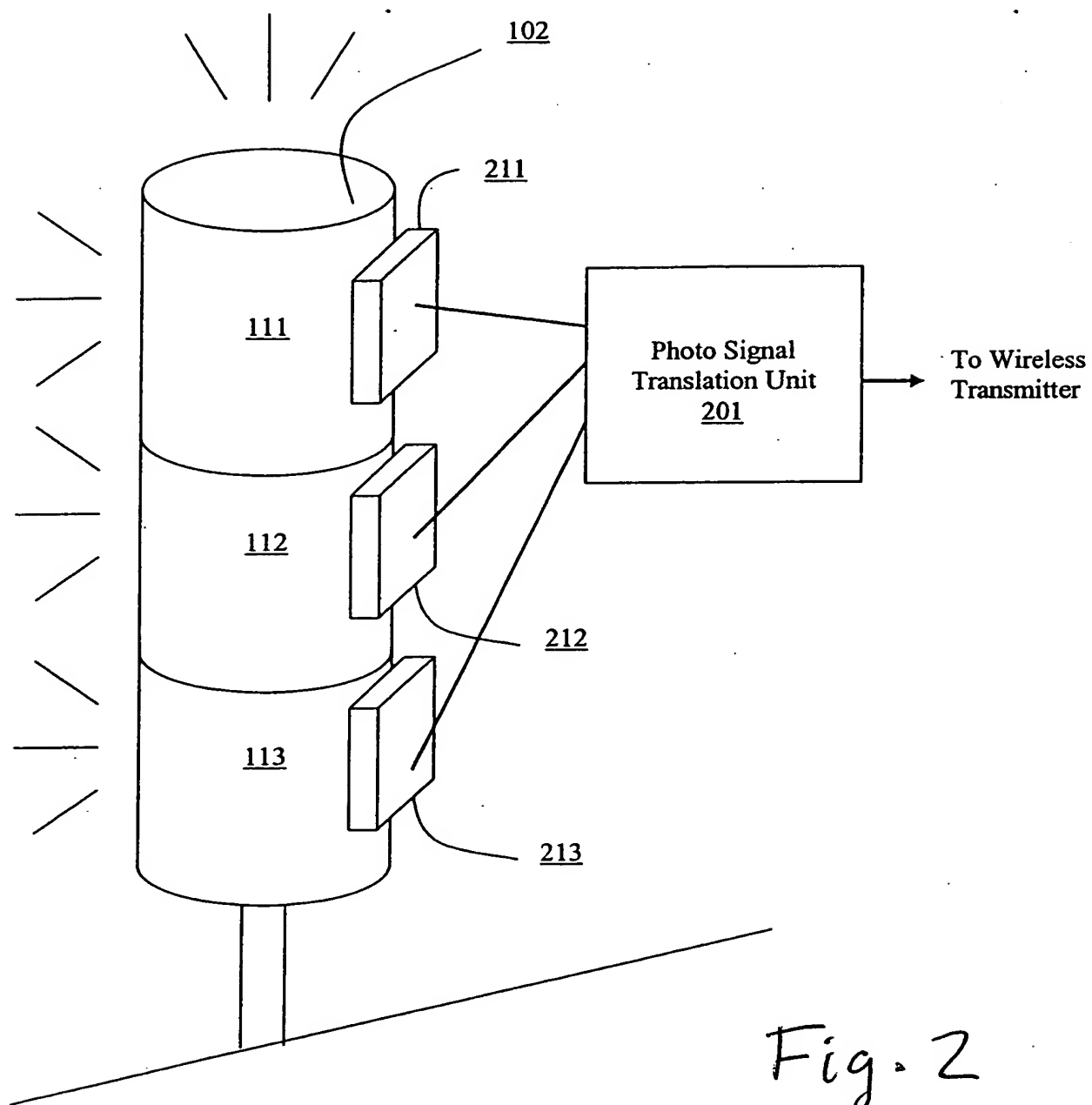


Fig. 1



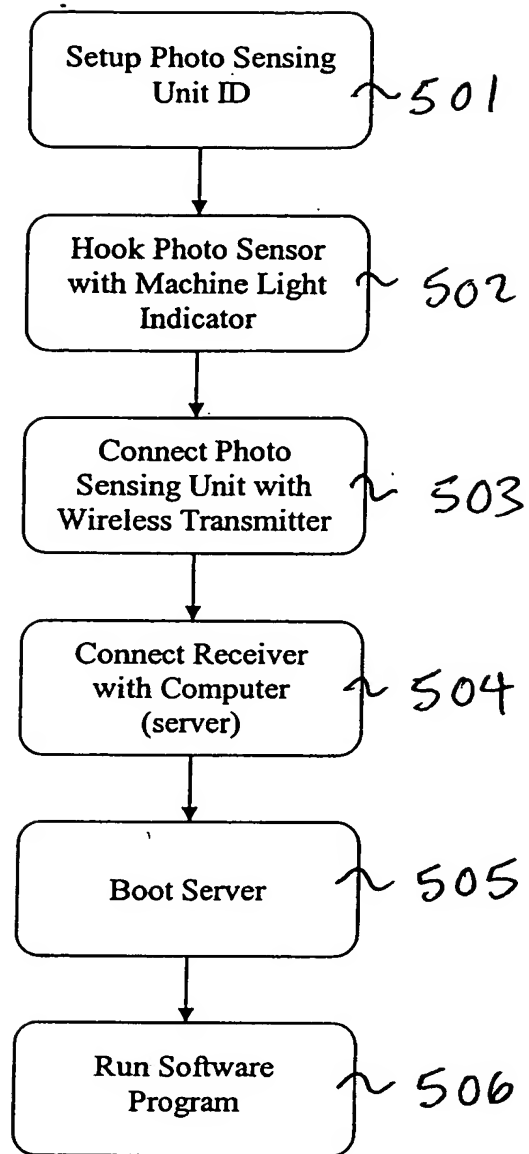


Fig. 3

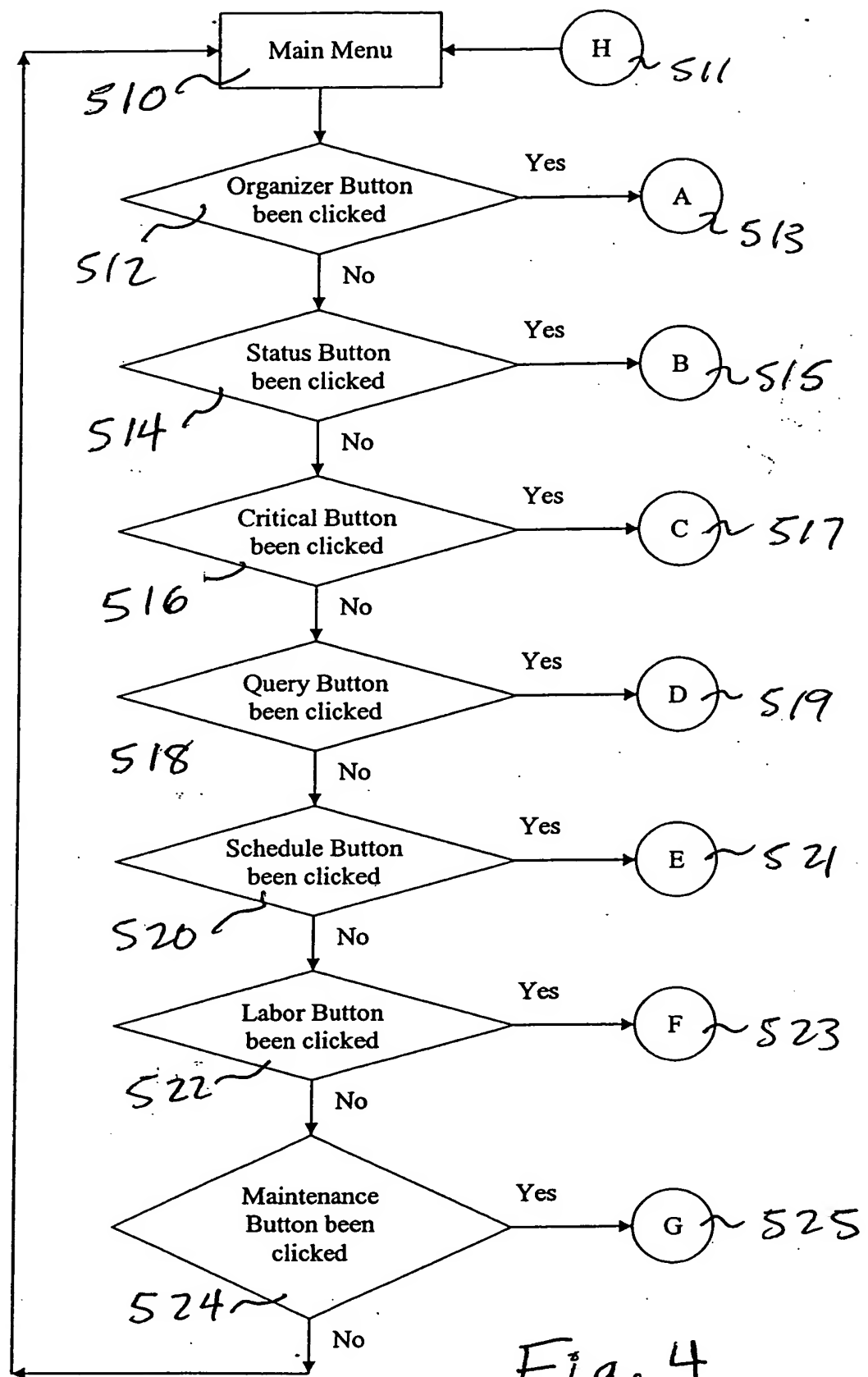


Fig. 4

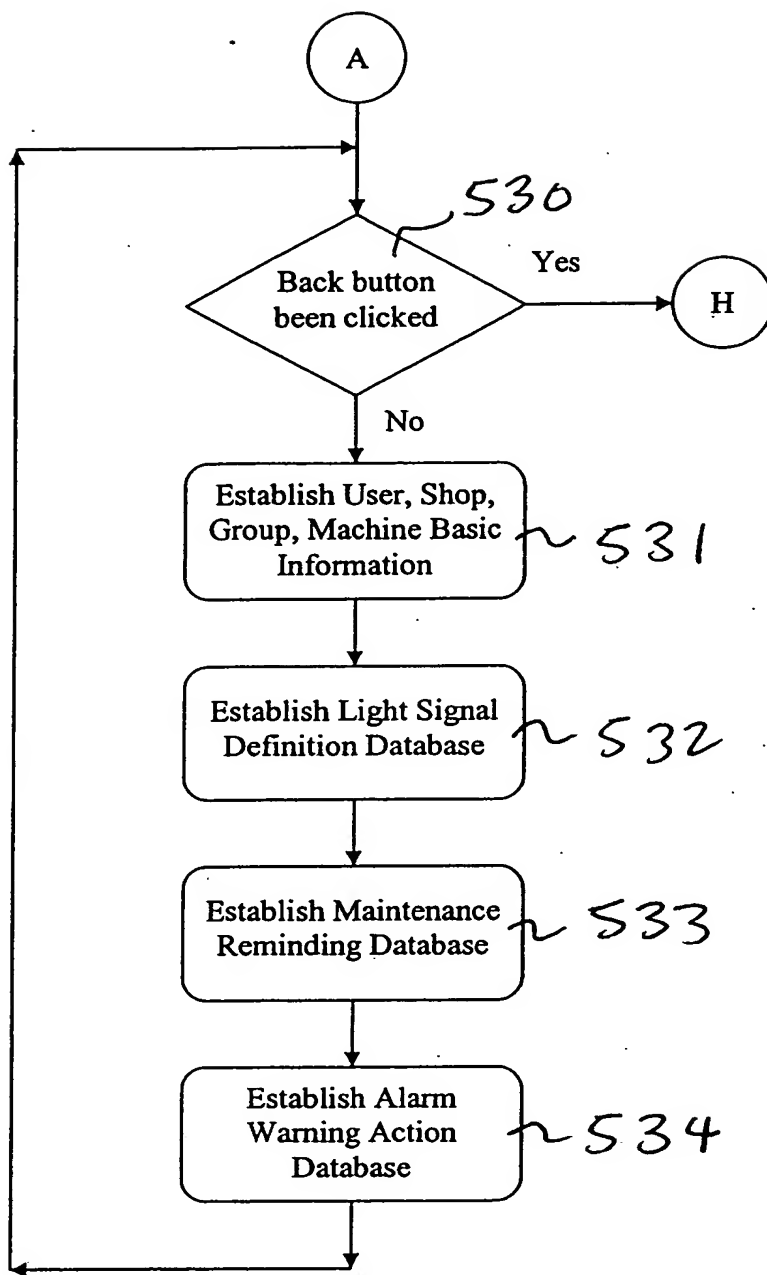


Fig. 5

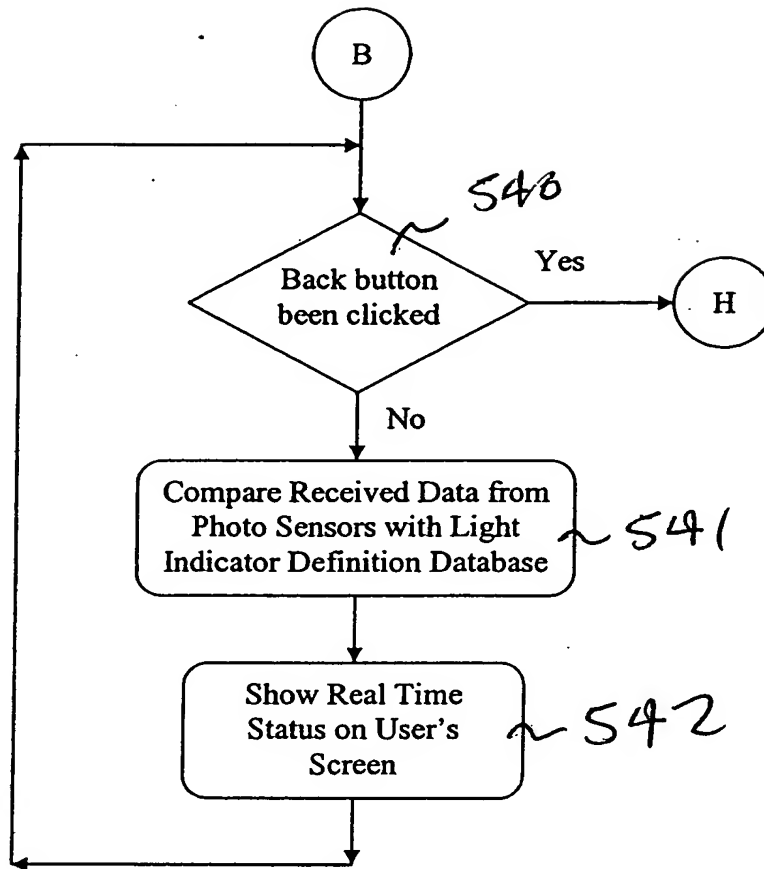


Fig. 6

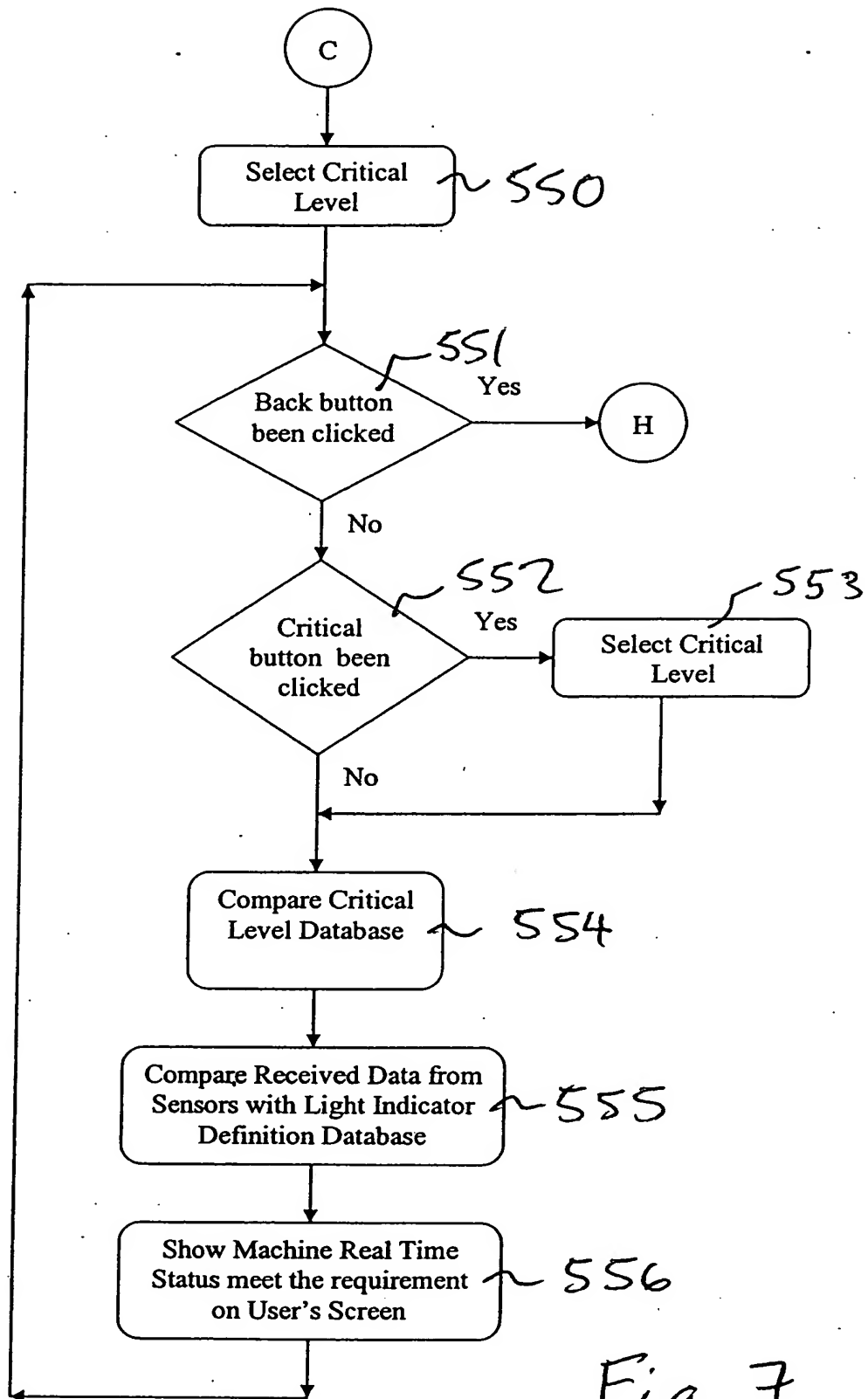
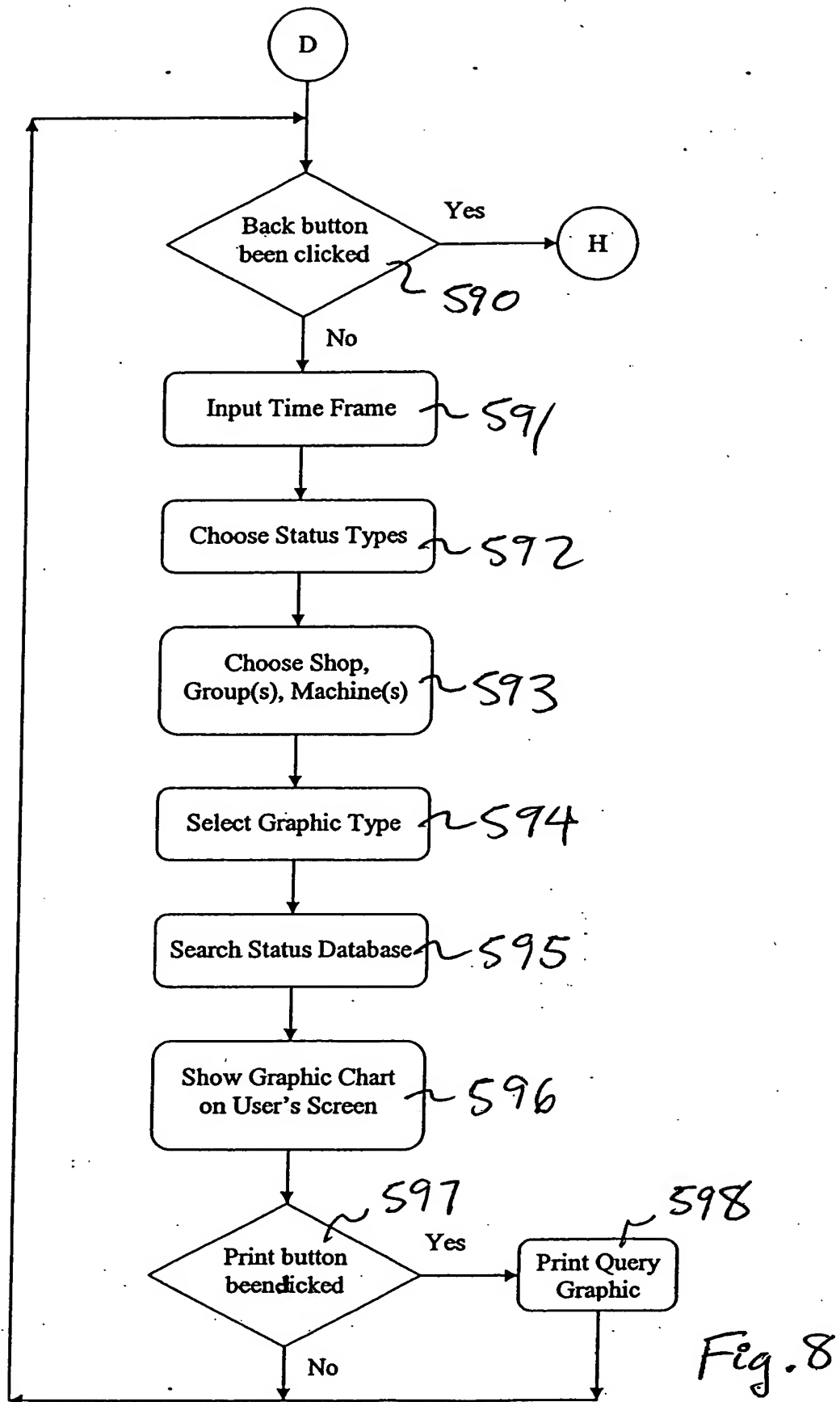


Fig. 7



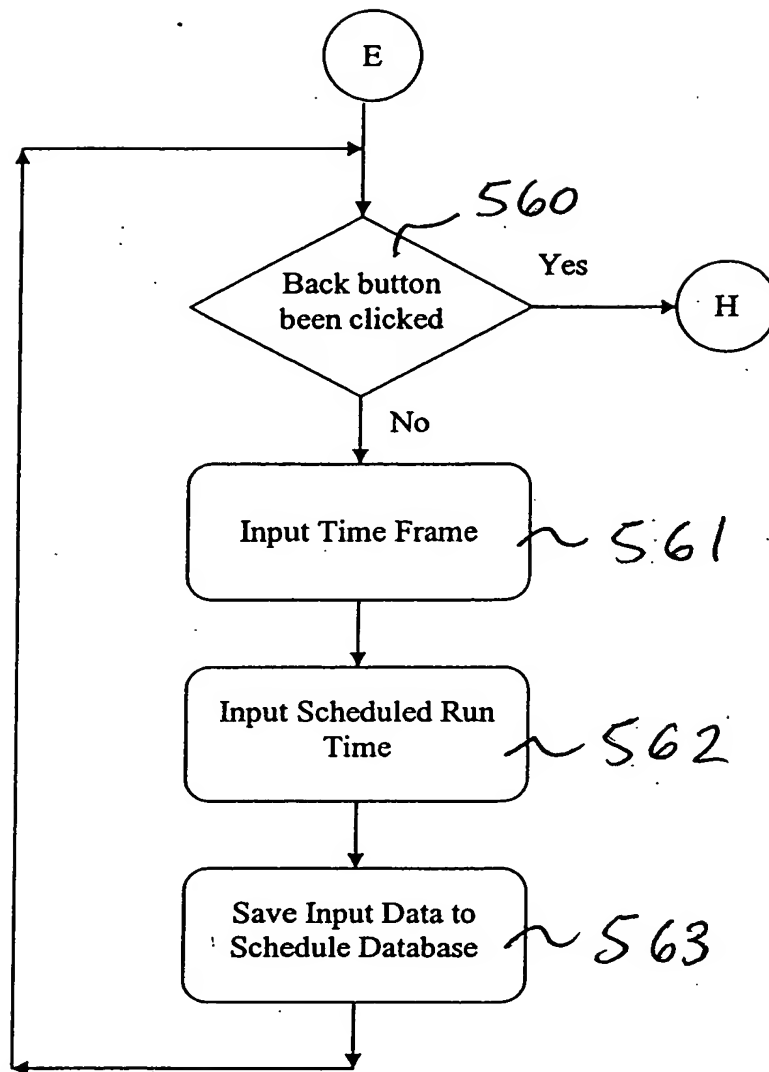


Fig. 9

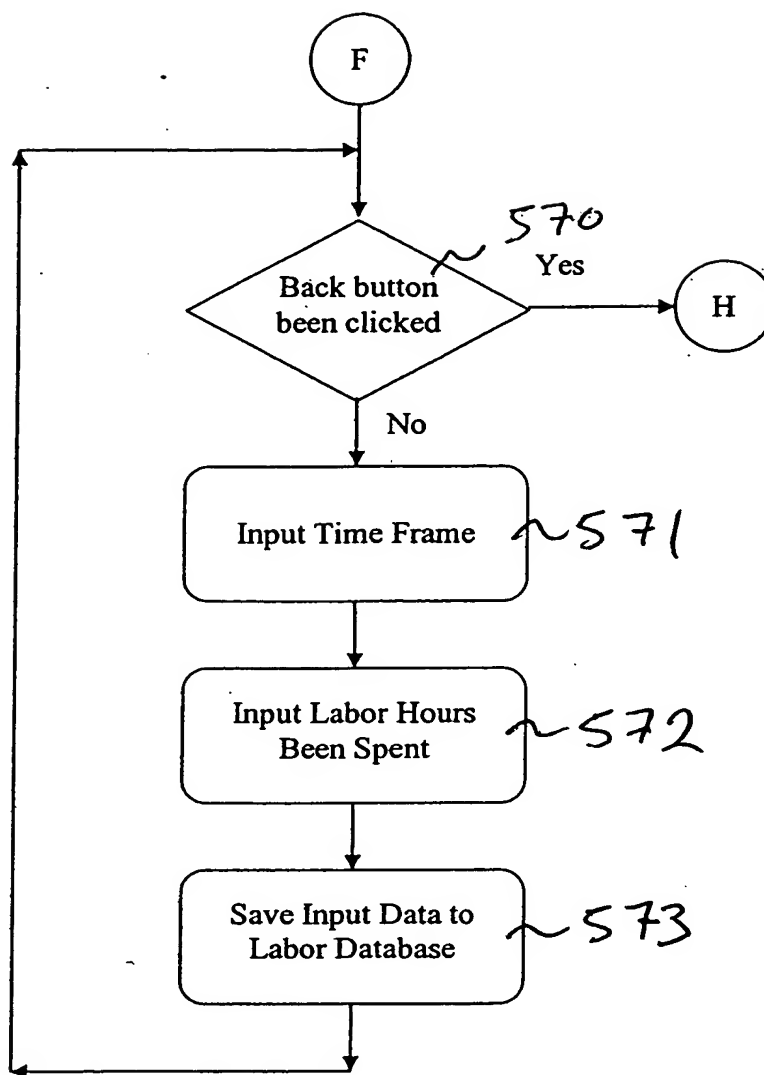


Fig. 10

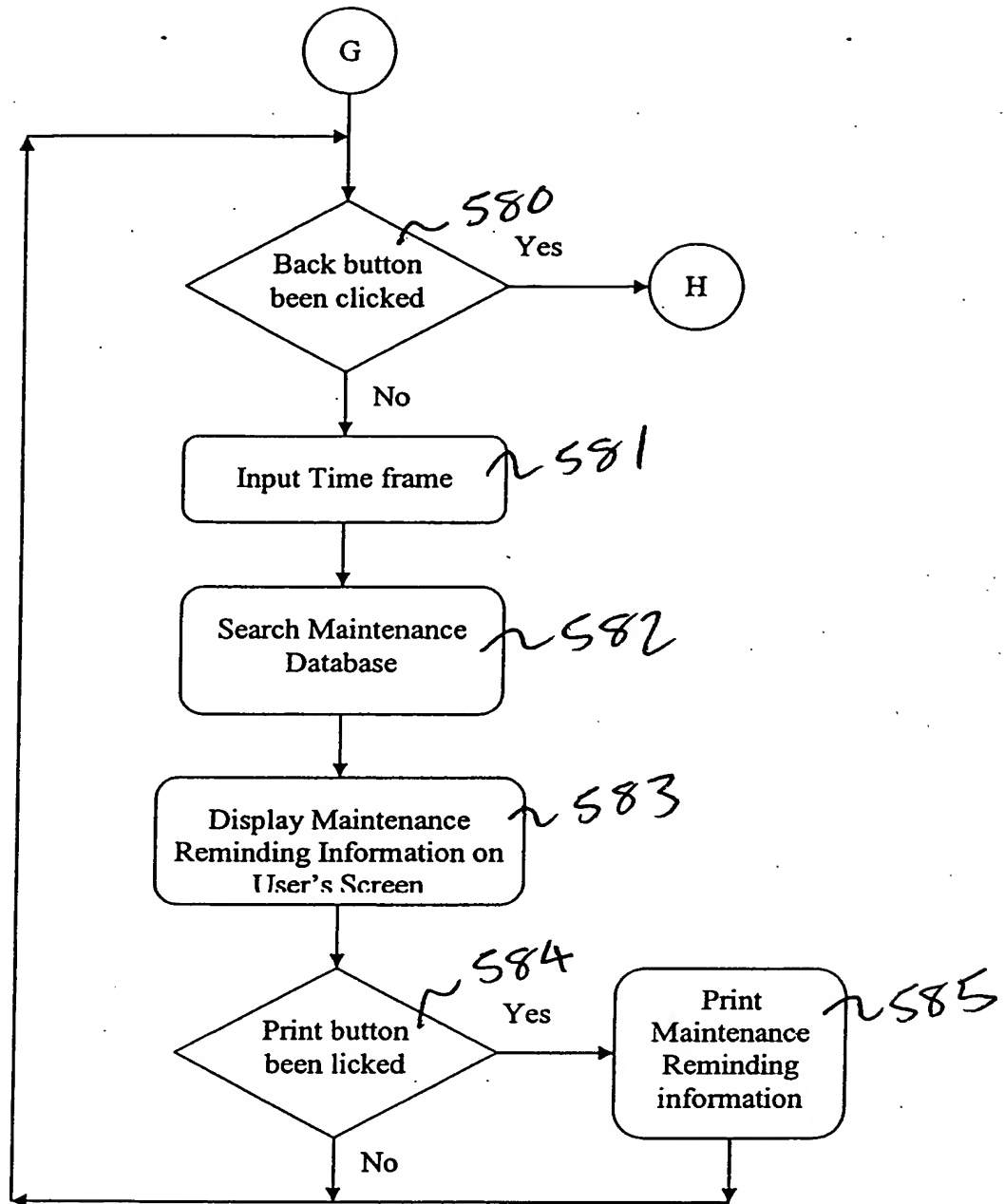


Fig. 11

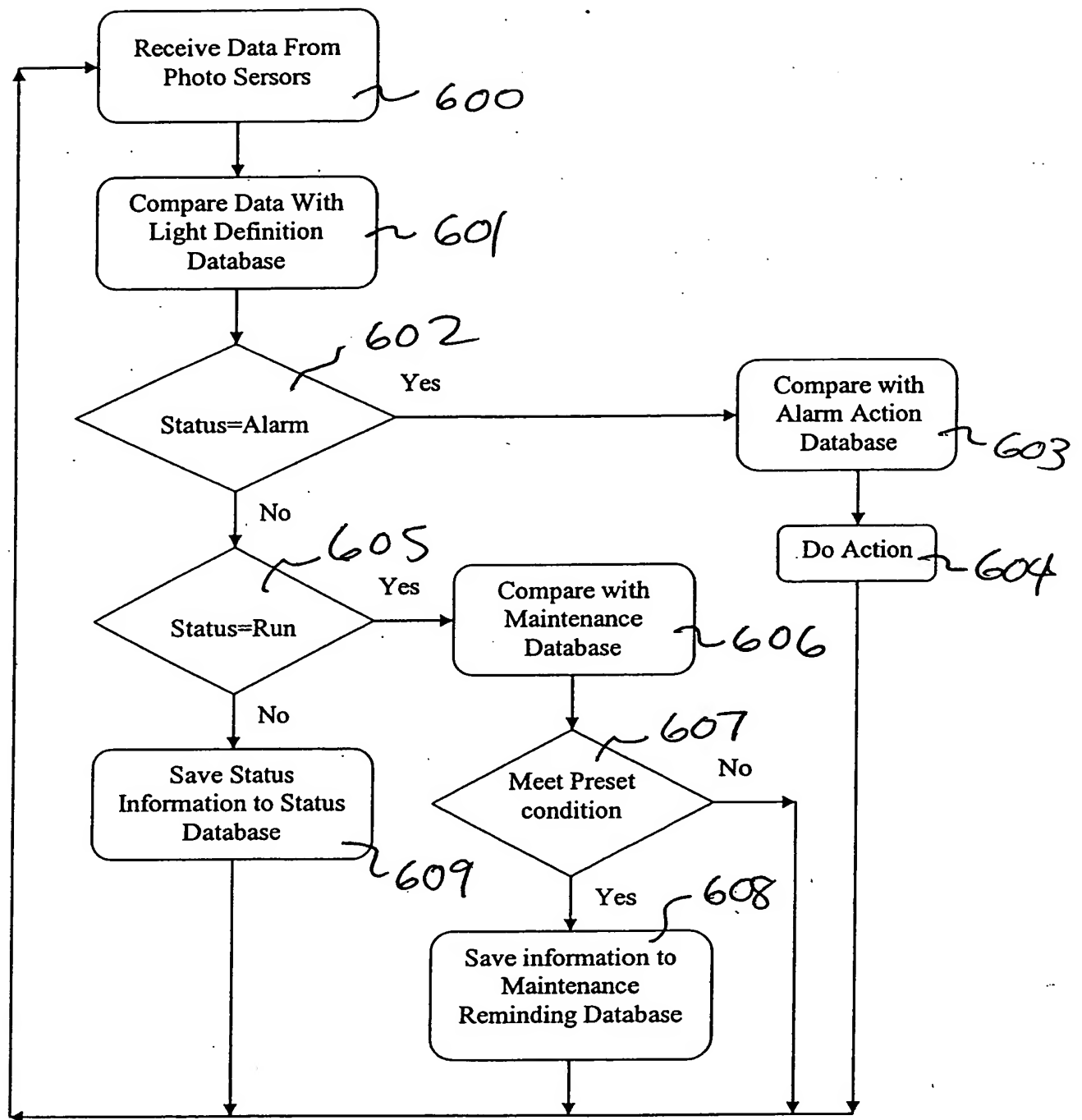


Fig. 12

Machine ID	Machine 110
Machine Name	Toshiba 6342-2
Transmitter/ sensor ID	002
Brand	Toshiba
Model No.	TFA- 6342
Critical Level	3
Group	Group100
Manager	John Peterson
Supervisor	Bob Dean
Operator	Dennis Atirega
Location	F10
Monitoring	<input checked="" type="checkbox"/> Enable <input type="checkbox"/> Disable
	<div>Signal Definition</div>
	<div>Maintenance Items</div>
	<div>Alarm Warning</div>
<div>OK</div> <div>Cancel</div>	

Fig. 13

Machine110 Toshiba 6342-2				Signal Definition			
Status				Lights Indicators			
Run	Idle	Alarm	PWdown	Green	Yellow	Red	Power
●	○	○	○	●	○	○	●
●	○	○	○	●	●	○	●
○	●	○	○	○	●	○	●
○	○	●	○	○	○	●	●
○	○	○	●	○	○	○	○

m is as following:

Machine 110 Toshiba 6342-2 Maintenance Item					
		Edit	Delete	New	Back
Maintenance Item	Description	Run Hours	Cycle Days		
Coolant change	16 Gals	120	180		
Oil Change	XYZ Table	280	400		

- i. The first line of data means the machine110 needs to do the coolant change(16 Gallons) every 120 run hours or every 180 days.
- ii. The second line of data means the machine110 needs to do the oil change(XYZ table) every 280 hours or every 400 days.

Fig. 15

Machine 110 Toshiba 6342-2 Alarm Warning	
<input type="checkbox"/> Disable	
<input checked="" type="checkbox"/> Blinking	After <u>5</u> minutes
<input checked="" type="checkbox"/> Beep	After <u>10</u> minutes
<input checked="" type="checkbox"/> E-mail	After <u>18</u> minutes Message: <u>Machine110 gets Alarm</u> Address1: <u>djohnson@hotmail.com</u> Address2: <u>tthomason@yahoo.com</u> Address3:
<input checked="" type="checkbox"/> Page	After <u>20</u> minutes Message: " <u>Machine110 Alarm</u> " Pager No.1: <u>818-318-3558</u> Pager No.2 Pager No.3
<input checked="" type="checkbox"/> Call	After <u>30</u> minutes Voice File Name: <u>c:\ms\m110.voc</u> Tel No.1: <u>818-417-4875</u> Tel No.2 Tel No.3
<div style="text-align: right;"> <input type="button" value="OK"/> <input type="button" value="Cancel"/> </div>	

Fig 1-4

- i. The icon of machine110 on user's screen will blink after the machine starts alarming for five minutes.
- ii. The user's buzzer will beep after the machine starts alarming for 10 minutes.
- iii. The server will send e-mail to djohnson@hotmail.com and tthomason@yahoo.com after the machine starts alarming for 18 minutes.
- iv. The server will page 818-318-3558 after the machine starts alarming for 20 minutes.
- v. The server will send a voice message to 818-417-4875 after the machine starts alarming for 30 minutes.

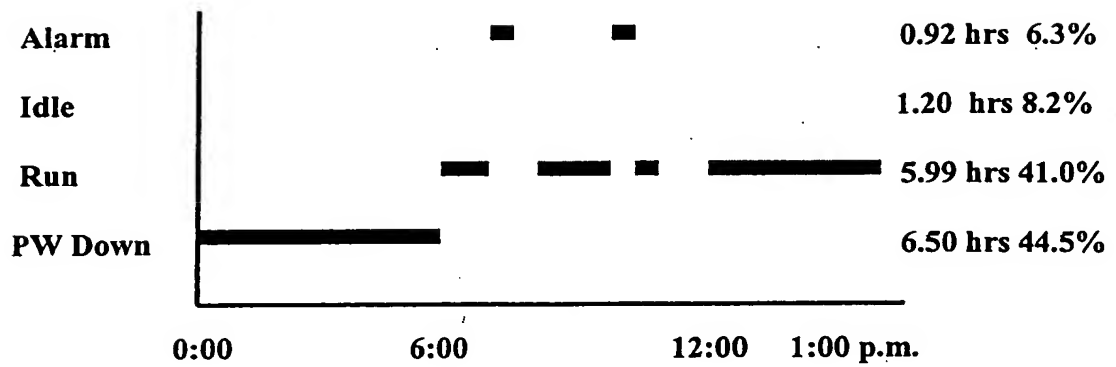
Fig. 16

Status	Run	Down	Idle	Alarm	PWDown	Back
Shop						
22.88						
Group 100	Machine10	Machine120	Machine130			
8.97	3.54	1.21	4.22			
Group 200	Machine210	Machine220				
6.13	3.19	2.94				
Group 300	Machine310	Machine320	Machine330			
7.78	2.56	3.28	1.94			

- i. The machines with green background means running, with yellow means idle, with red means alarming, or with blue color means power down.
- ii. The number below the shop or each group or machine represents the accumulated hours of the present day's run, down, idle, alarm or power down status depending on which button has been clicked.

Fig. 17

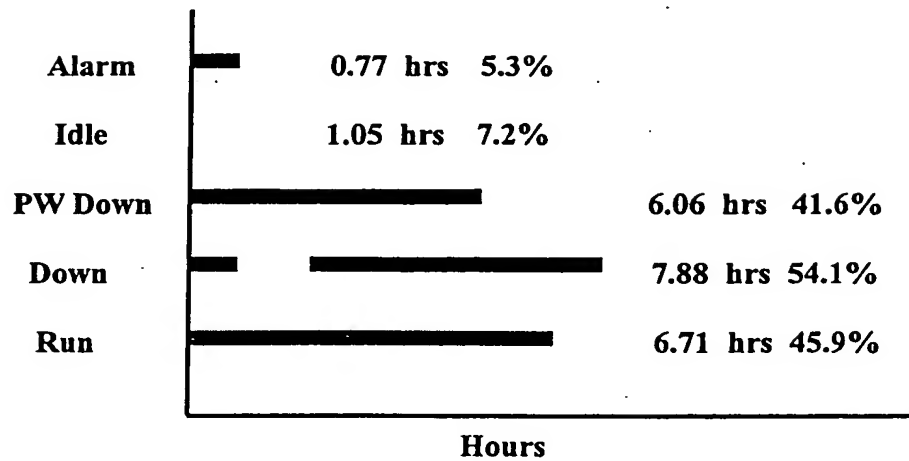
Machine 120 05/25/2003 2:36 p.m.



- i. The graphic shows the process of detail status for the present day – 5/25/2003 from 0:00 a.m. to the present time(2:36 p.m.)
- ii. The right side numbers of the graphic are the accumulated hours for each status and percentage from 0:00 a.m. to 2:36 p.m.

Fig. 18

Group 200 5/25/2003 2:36 p.m.



- i. The graphic shows the accumulated machine status hours in this group for the present day – 5/25/2003 from 0:00 a.m. to the present time(2:36 p.m.)
- ii. The right side numbers of the graphic are the accumulated machine status hours in this group for each status and percentage from 0:00 a.m. to 2:36 p.m.

Fig. 19

Critical	Level	2	Run	Down	Idle	Alarm	PWDown	Back
----------	-------	---	-----	------	------	-------	--------	------

Machine 120	Machine 210	Machine 320	Machine 330
1.21	3.19	3.28	1.94

- i. The critical level can be preset in each machine's property.
- ii. For example, the critical level setting of
 - Machine 110, Machine 130, and Machine 220 are 1
 - Machine 310 is 4
 - Machine 120, Machine 210, Machine 320, and Machine330 are 2
- iii. The screen will show all the machine status icon when the exact critical level was chosen.

Fig. 20

Query	Day	Week	Month	Bar	Line	Pie	Run	Down	Idle	Alarm	PW ↓	
	From: mm/dd/yyyy To: mm/dd/yyyy						Schedule		Labor			
<div>Shop</div> <div></div>							Reset		GO		Back	
Group 100			Machine 110		Machine 120		Machine 130					
Group 200			Machine 210		Machine 220							
Group 300			Machine 310		Machine 320		Machine 330					

The various graphic query can be made according to the following options:

- Time (Day, Week, Month, or a period of time)
- Status (Run, ~~Down~~, Idle, Alarm, Power Down, Run time with Run Schedule, or Run time with Labor hours)
- Machines(or Groups, Shop)
- Graphic type (Bar, Line, or Pie chart)

Fig. 21

Query **Day** **Week** **Month** **Bar** **Line** **Pie** **Run** **Down** **Idle** **Alarm** **PW ↓**

From: 05/10/2003 To: 05/10/2003 **Schedule** **Labor**

Shop

Reset **GO** **Back**

Group 100	Machine 110	Machine 120	Machine 130
Group 200	Machine 210	Machine 220	
Group 300	Machine 310	Machine 320	Machine 330

Fig. 22

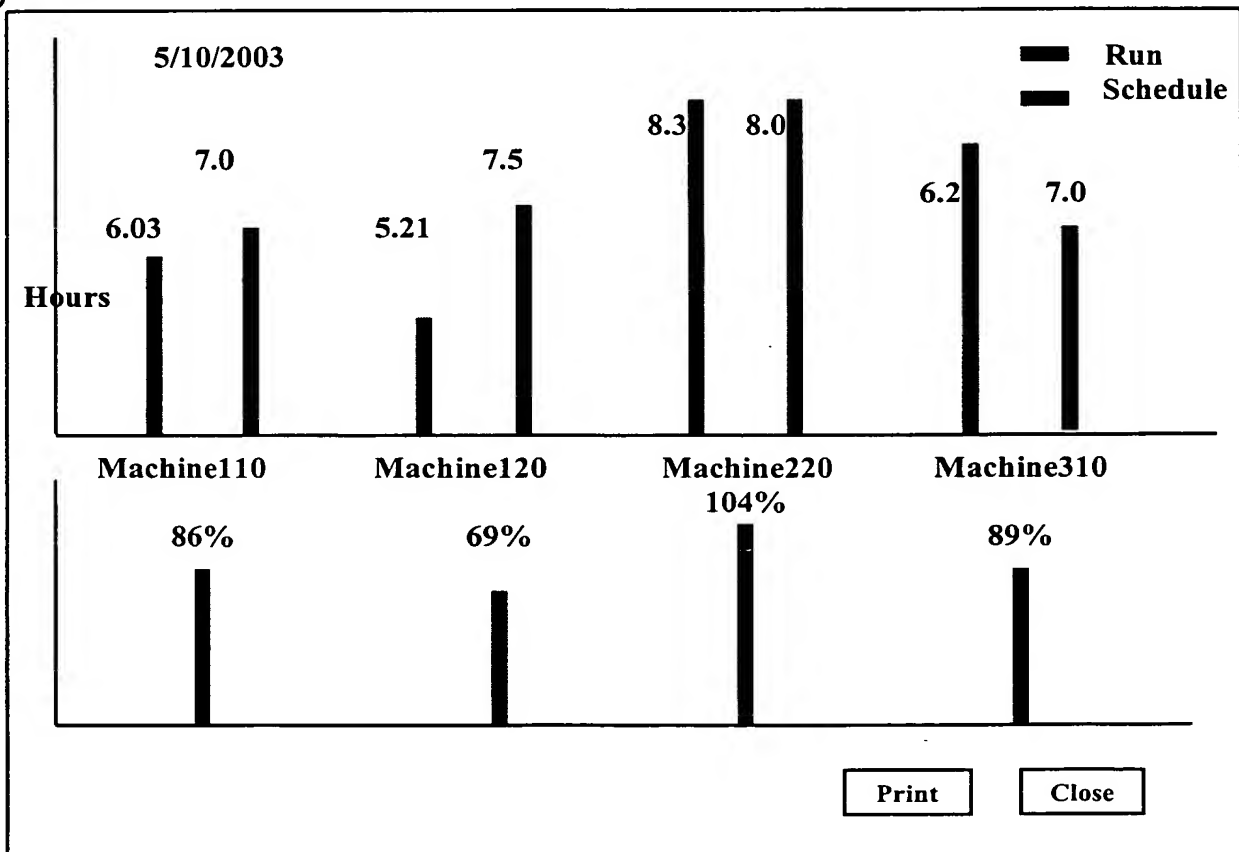


Fig. 23

Query

From: 5/4/2003 To: 6/7/2003

Shop			
Group 100	Machine 110	Machine 120	Machine 130
Group 200	Machine 210	Machine 220	
Group 300	Machine 310	Machine 320	Machine 330

Fig. 24

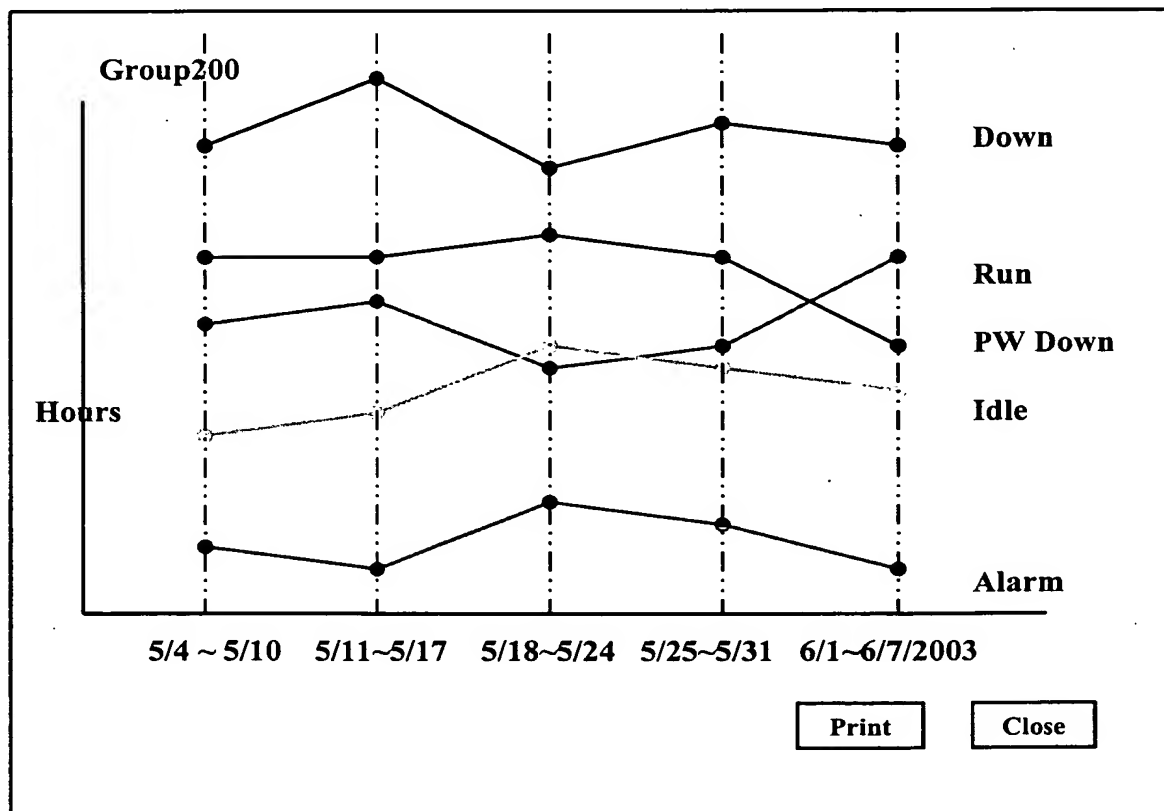


Fig. 25

Schedule		Day	Week	Month	Clear	Cancel	OK	Back								
From:mm/dd/yyyy To: mm/dd/yyyy																
<table border="1"><tr><td colspan="4">M & P Shop</td></tr><tr><td colspan="4"></td></tr></table>									M & P Shop							
M & P Shop																
<table border="1"><tr><td>Group 100</td><td>Machine110</td><td>Machine120</td><td>Machine130</td></tr><tr><td></td><td></td><td></td><td></td></tr></table>									Group 100	Machine110	Machine120	Machine130				
Group 100	Machine110	Machine120	Machine130													
<table border="1"><tr><td>Group 200</td><td>Machine210</td><td>Machine220</td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>									Group 200	Machine210	Machine220					
Group 200	Machine210	Machine220														
<table border="1"><tr><td>Group 300</td><td>Machine310</td><td>Machine320</td><td>Machine330</td></tr><tr><td></td><td></td><td></td><td></td></tr></table>									Group 300	Machine310	Machine320	Machine330				
Group 300	Machine310	Machine320	Machine330													

Fig. 26

Labor	Day	Week	Month	Clear	Cancel	OK	Back
From:mm/dd/yyyy To: mm/dd/yyyy							
M & P Shop							
Group 100	Machine110	Machine120	Machine130				
Group 200	Machine210	Machine220					
Group 300	Machine310	Machine320	Machine330				

Fig. 27

Maintenance From: 05/12/2003 To: 05/19/2003

Print

Back

Date	Machine ID	Machine Name	Maintenance Item	M.Cycle
05/12/03	Machine 120	Toshiba 5xgt	Oil Change	500 Hours
05/13/03	Machine 210	Hitachi brizer 3x	Coolant Change	200 Hours
05/13/03	Machine 330	Mazak sprinder GL	Coolant Change	30 Days

Fig. 28